AMENDMENT TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application.

LISTING OF CLAIMS:

1-7. (Canceled)

8. (Previously Presented) An isolated human smooth muscle myosin heavy chain polypeptide, wherein the polypeptide comprises the amino acid sequence of SEQ ID NO:2 and has ATPase activity or actin binding activity.

9-15. (Canceled)

16. (Previously Presented) An isolated human smooth muscle myosin heavy chain polypeptide, wherein the polypeptide comprises the amino acid sequence of SEQ ID NO:6 and has ATPase activity or actin binding activity.

17. (Previously Presented) An isolated human smooth muscle myosin heavy chain polypeptide, wherein the polypeptide comprises the amino acid sequence of SEQ ID NO:8 and has ATPase activity or actin binding activity.

18. (Previously Presented) An isolated human smooth muscle myosin heavy chain polypeptide, wherein the polypeptide comprises the amino acid sequence of SEQ ID NO:10 and has ATPase activity or actin binding activity.

19. (Previously Presented) An isolated human smooth muscle myosin heavy chain polypeptide, wherein the polypeptide comprises the amino acid sequence of SEQ ID NO:12 and has ATPase activity or actin binding activity.

20. (Previously Presented) An isolated human smooth muscle myosin heavy chain polypeptide, wherein the polypeptide comprises the amino acid sequence of SEQ ID NO:14 and has ATPase activity or actin binding activity.

21. (New) A method for screening for modulators of an hSMMyHC polypeptide, the method comprising the steps of:

(i) providing biologically active hSMMyHC polypeptide, wherein the polypeptide has the following properties: (i) activity including ATPase function or the ability to bind actin; and (ii) comprising the amino acid sequence of SEQ ID NO:2; SEQ ID NO:6; SEQ ID NO:8; SEQ ID NO:10; SEQ ID NO:12; or SEQ ID NO:14;

(ii) contacting biologically active hSMMyHC polypeptide with a candidate agent in a test and control concentration; and

(iii) assaying for the level of hSMMyHC polypeptide activity, wherein the hSMMyHC polypeptide activity is selected from the group consisting of actin binding activity or ATPase activity, and wherein a change in activity between the test and control concentration indicates a modulator.

22. (New) A method of claim 21, wherein the screening occurs in a multi-well plate as part of a high-throughput screen.